



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,653	09/23/2003	Christophe Carola	MERCK-2753	9118

23599 7590 02/02/2006

MILLEN, WHITE, ZELANO & BRANIGAN, P.C.  
2200 CLARENDON BLVD.  
SUITE 1400  
ARLINGTON, VA 22201

EXAMINER

CHONG, YONG SOO

ART UNIT PAPER NUMBER

1617

DATE MAILED: 02/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/667,653	<b>Applicant(s)</b> CAROLA ET AL.	
	<b>Examiner</b> Yong S. Chong	<b>Art Unit</b> 1617	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 November 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 12-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Status of the Application*

This Office Action is in response to applicant's response filed on 11/16/2005.

Applicant's election **with** traverse of the restriction requirement in the reply is acknowledged. The traversal is on the ground(s) that there is no search burden. This is not found persuasive because of the following: A search for a method of achieving an anti-oxidant effect will not lead to the search for compounds of formula I. Furthermore, the process of preparing a composition in claims 12-13 simply involve mixing, which is prevalent in the literature. Finally, selenium is well-known in the art to have good anti-oxidant effects. The requirement is still deemed proper and is therefore made FINAL. Claims 1-18 are pending. Claims 12-17 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Claims 1-11, 18 are examined herein.

### *Double Patenting*

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Art Unit: 1617

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-11 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 11-14 of copending Application No. 10/920,202. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims disclose a composition comprising a compound of formula I, an antioxidant, and a UV filter.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

#### ***Claim Rejections - 35 USC § 101***

The following is a quotation of 35 U.S.C. 101:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The claimed invention is directed to non-statutory subject matter. Claims 1-4 are rejected under 35 U.S.C. 101 as nonstatutory subject matter because the claims read on natural products, for example quercetin and myricetin. Hand of man must be evident in the claimed compound or composition.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claim 1 recites the limitation "at least 2 pairs" for the compound where "at least 3 radicals" is stated earlier. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Ulubelen et al. (Phytochemistry, 1980, vol. 19, pg. 1761-1766).

Ulubelen et al. teach six new and nine known flavonoids, obtained from *Neurolaena oaxacana* (abstract). The specific compounds are disclosed in formulas 1-7 and 9-14.

Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Balentine et al. ("Phenolic Compounds in Food and Their Effects on Health I, 202<sup>nd</sup> National Meeting of the American Chemical Society, New York, NY, August 25-30, 1991, Chapter 8, pg. 102-117).

Balentine et al. teach that flavonoids, quercetin and myricetin, are present in green tea (table IV).

Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Pratt et al. ("Phenolic Compounds in Food and Their Effects on Health II, 202<sup>nd</sup> National

Art Unit: 1617

Meeting of the American Chemical Society, New York, NY, August 25-30, 1991, Chapter 5, pg. 54-71).

Balentine et al. disclose the following flavonoids, quercetin, myricetin (table VI), fisetin, and luteolin (pg. 60) as natural antioxidants (abstract).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham vs John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-11, 18 are rejected under 35 U.S.C. 103(a) as being obvious over Ley et al. (US Patent 6,265,611 B1) in view of Prendergast et al. (WO 01/03681 A2) and further in view of Jensen et al. (US Patent 2,550,255).

The instant claims are directed to a composition comprising a compound of formula I, an antioxidant, and a UV filter.

Ley et al. teach an antioxidant composition for use in foods and cosmetics (abstract). Among the auxiliaries and additives, preservatives, bactericides, fungicides, emulsifiers, other antioxidants such as tocopherols, vitamin E, vitamin C, vitamin A (col. 4, lines 15-49), and UV filters such as 3-(4-methylbenzylidene)-dl-camphor (col. 5, lines 1-11) may be added in the amounts between 5-95% by weight (col. 4, lines 15-16).

However, Ley et al. fail to disclose specifically the bactericide or fungicide of formula I.

Prendergast et al. teach a composition comprising a compound of formula 1, where X1 = O, X2 = carbonyl, R8 = H or OH, R10 = OH, and a double bond between carbons 2 and 3 (pg. 4, lines 1-21). Moreover, the composition containing this compound can be formulated into an emulsion (pg. 28, lines 24-28) and can contain antioxidants (pg. 30, line 34). Compounds of formula 1 are disclosed to be used as a bactericide or fungicide (pg. 33, lines 26-27).

Therefore, it would have been prima facie obvious to a person of ordinary skill in the art, at the time the claimed invention was made, to substitute the bactericide/fungicide of formula 1 as taught by Prendergast et al. into the composition as taught by Ley et al.

A person of ordinary skill in the art would have been motivated to make this substitution because the anti-bacterial properties of the compound of formula 1 as taught by Prendergast et al. can be used as a preservative on foods to prevent spoilage and decomposition as taught by Jensen et al. (col. 1, lines 34-56).

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yong S. Chong whose telephone number is (571)-272-8513. The examiner can normally be reached on M-F, 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, SREENI PADMANABHAN can be reached on (571)-272-0629. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YSC

SHENGJUN WANG  
PRIMARY EXAMINER